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Immunize.ST25.txt

SEQUENCE LISTING

<110> Kiselev, Vsevolod I  
Petr, Sveshnikov G

<120> METHODS, KITS, AND COMPOSITIONS FOR THE DEVELOPMENT AND USE OF  
MONOCLONAL ANTIBODIES SPECIFIC TO ANTIGENS TRADITIONALLY OF LOW  
IMMUNOGENICITY

<130> Immunize

<150> RU 2003128660

<151> 2003-09-25

<160> 22

<170> PatentIn version 3.1

<210> 1

<211> 309

<212> DNA

<213> Human papillomavirus type 16

<220>

<221> CDS

<222> (7)..(303)

<223>

<400> 1

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Ile Met His Gly Asp Thr Thr Leu His Glu Tyr Met Leu  
1 5 10

gat ttg caa cca gag aca act gat ctc tac tgt tat gag caa tta aat 96  
Asp Leu Gln Pro Glu Thr Thr Asp Leu Tyr Cys Tyr Glu Gln Leu Asn  
15 20 25 30

gac agc tca gag gag gag gat gaa ata gat ggt cca gct gga caa gca 144  
Asp Ser Ser Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln Ala  
35 40 45

gaa ccg gac aga gcc cat tac aat att gta acc ttt tgt tgc aag tgt 192  
Glu Pro Asp Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys Cys  
50 55 60

gac tct acg ctt cgg ttg tgc gta caa agc aca cac gta gac att cgt 240  
Asp Ser Thr Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile Arg  
65 70 75

act ttg gaa gac ctg tta atg ggc aca cta gga att gtg tgc ccc atc 288  
Thr Leu Glu Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro Ile  
80 85 90

tgt tct cag aaa cca ggaacc 309  
Cys Ser Gln Lys Pro  
95

## Immunize.ST25.txt

<210> 2  
 <211> 99  
 <212> PRT  
 <213> Human papillomavirus type 16

<400> 2

Ile Met His Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu  
 1 5 10 15

Gln Pro Glu Thr Thr Asp Leu Tyr Cys Tyr Glu Gln Leu Asn Asp Ser  
 20 25 30

Ser Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln Ala Glu Pro  
 35 40 45

Asp Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys Cys Asp Ser  
 50 55 60

Thr Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile Arg Thr Leu  
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Glu Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro Ile Cys Ser  
 85 90 95

Gln Lys Pro

<210> 3  
 <211> 330  
 <212> DNA  
 <213> Human papillomavirus type 18

<220>  
 <221> CDS  
 <222> (7)..(324)  
 <223>

<400> 3  
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 1 5 10

cat tta gag ccc caa aat gaa att ccg gtt gac ctt cta tgt cac gag 96  
 His Leu Glu Pro Gln Asn Glu Ile Pro Val Asp Leu Leu Cys His Glu  
 15 20 25 30

caa tta agc gac tca gag gaa gaa aac gat gaa ata gat gga gtt aat 144  
 Gln Leu Ser Asp Ser Glu Glu Asn Asp Glu Ile Asp Gly Val Asn  
 35 40 45

## Immunize.ST25.txt

cat caa cat tta cca gcc cga cga gct gaa cca caa cgt cac aca atg 192  
His Gln His Leu Pro Ala Arg Arg Ala Glu Pro Gln Arg His Thr Met  
50 55 60

ttg tgt atg tgt tgt aag tgt gaa gcc aga att gag cta gta gta gaa 240  
Leu Cys Met Cys Cys Lys Cys Glu Ala Arg Ile Glu Leu Val Val Glu  
65 70 75

agc tca gca gac gac ctt cga gca ttc cag cag ctg ttt ctg aac acc 288  
Ser Ser Ala Asp Asp Leu Arg Ala Phe Gln Gln Leu Phe Leu Asn Thr  
80 85 90

ctg tcc ttt gtg tgt ccg tgg tgt gca tcc cag cag ggatcc 330  
Leu Ser Phe Val Cys Pro Trp Cys Ala Ser Gln Gln  
95 100 105

&lt;210&gt; 4

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Human papillomavirus type 18

&lt;400&gt; 4

Ser Met His Gly Pro Lys Ala Thr Leu Gln Asp Ile Val Leu His Leu  
1 5 10 15

Glu Pro Gln Asn Glu Ile Pro Val Asp Leu Leu Cys His Glu Gln Leu  
20 25 30

Ser Asp Ser Glu Glu Glu Asn Asp Glu Ile Asp Gly Val Asn His Gln  
35 40 45

His Leu Pro Ala Arg Arg Ala Glu Pro Gln Arg His Thr Met Leu Cys  
50 55 60

Met Cys Cys Lys Cys Glu Ala Arg Ile Glu Leu Val Val Glu Ser Ser  
65 70 75 80

Ala Asp Asp Leu Arg Ala Phe Gln Gln Leu Phe Leu Asn Thr Leu Ser  
85 90 95

Phe Val Cys Pro Trp Cys Ala Ser Gln Gln  
100 105

&lt;210&gt; 5

&lt;211&gt; 5321

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nucleotide sequence of recombinant vector pQE30-dnaK

## Immunize.ST25.txt

&lt;400&gt; 5

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ggatcgcatc accatcacca tcacggatcc gctcgtgcgg tcgggatcga cctcgggacc 180  
accaactccg tcgtctcggt tcggaagggt ggcgaccgg tcgtcgtcgc caactccgag 240  
ggctccagga ccaccccgtc aattgtcgcg ttcgcccga acggtgaggt gctggtcggc 300  
cagcccgcca agaaccaggc agtgaccaac gtcgatcga ccgtgcgctc ggtcaagcga 360  
cacatgggca gcgactggtc catagagatt gacggcaaga aatacccgcc gccggagatc 420  
agcggccgca ttctgatgaa gctgaagcgc gacggcgagg cctacctcgg tgaggacatt 480  
accgacgcgg ttatcacgac gccgcctac ttcaatgacg cccagcgtca ggccaccaag 540  
gacggcgccc agatcgccgg cctcaacgtg ctgcggatcg tcaacgagcc gaccgcgccc 600  
gcgctggcct acggcctcga caagggcgag aaggagcagc gaatcctggt cttcgacttg 660  
ggtggtggca ctttcgactg ttccctgctg gagatcggcg aggggtgtgt tgaggtccgt 720  
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gacgccgaag cgcacgccga ggaggtatcg aagcgtcgcg aggaggccga tgttcgtaat 1680  
caagccgaga cattggtcta ccagacggag aagttcgtca aagaacagcg tgaggccgag 1740

## Immunize.ST25.txt

ggtaggtcga aggtacctga agacacgctg aacaagggtg atgccgcggt ggcggaagcg 1800  
aaggcgccac ttggcggatc ggatattcg gccatcaagt cggcgatgga gaagctgggc 1860  
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tgccggcagc ggtatcagct cactcaaagg cggtaatacg gttatccaca gaatcagggg 3420  
ataacgcagg aaagaacatg tgagcaaaag gccagcaaaa ggccaggaac cgtaaaaagg 3480

## Immunize.ST25.txt

ccgcgttgct ggcggttttc cataggctcc gccccctga cgagcatcac aaaaatcgac 3540  
gctcaagtca gaggtggcga aacccgacag gactataaag ataccaggcg ttccccctg 3600  
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aatgtgaat actcatactc ttcttttc aatattattg aagcattat cagggttatt 5160  
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gcacattcc ccgaaaagt ccacctgacg tctaagaaac cattattatc atgacattaa 5280

Immunize.ST25.txt

cctataaaaa taggcgtatc acgaggccct ttcgtcttca c 5321

<210> 6  
<211> 12  
<212> PRT  
<213> Bos taurus

<400> 6

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1 5 10

<210> 7  
<211> 8  
<212> PRT  
<213> bos taurus

<400> 7

Gln Pro His Gly Gly Gly Trp Gly  
1 5

<210> 8  
<211> 13  
<212> PRT  
<213> bos taurus

<400> 8

Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Ile Lys  
1 5 10

<210> 9  
<211> 17  
<212> PRT  
<213> bos taurus

<400> 9

Ile Thr Gln Tyr Gln Arg Glu Ser Gln Ala Tyr Tyr Gln Arg Gly Ala  
1 5 10 15

Ser

<210> 10  
<211> 19  
<212> DNA  
<213> Human papillomavirus type 16

<400> 10  
tgacagctca gaggaggag

## Immunize.ST25.txt

<210> 11  
<211> 19  
<212> DNA  
<213> Human papillomavirus type 16

<400> 11  
gcacaaccga agcgtagag 19

<210> 12  
<211> 20  
<212> DNA  
<213> Human papillomavirus type 18

<400> 12  
gcgactcaga ggaagaaaac 20

<210> 13  
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<212> DNA  
<213> Human papillomavirus type 18

<400> 13  
caaaggacag ggtgttcaga 20

<210> 14  
<211> 31  
<212> DNA  
<213> Human papillomavirus type 18

<400> 14  
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<210> 15  
<211> 30  
<212> DNA  
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<400> 15  
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<210> 16  
<211> 31  
<212> DNA  
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<400> 16  
attctcgaat tcatcatgca tggagataca c 31

<210> 17  
<211> 31  
<212> DNA



Immunize.ST25.txt

&lt;213&gt; Human papillomavirus type 16

&lt;400&gt; 17

cttatcgga cctggttct gagaacagat g 31

&lt;210&gt; 18

&lt;211&gt; 130

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; pHE716 and pHE718 terminal sequences

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (107)..(108)

&lt;223&gt; HSP 16/HSP18 E7 gene insertion site

&lt;400&gt; 18

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ttaagaagg agatatacat atgcatcacc atcaccatca cgaattcgga tcctaattag 120

ctgaaagctt 130

&lt;210&gt; 19

&lt;211&gt; 28

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; Forward primer for pHE716

&lt;400&gt; 19

gaagatctat gcatggagat acacctac 28

&lt;210&gt; 20

&lt;211&gt; 28

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; reverse primer for pHE716

&lt;400&gt; 20

cgggatcctg gttctgaga acagatgg 28

&lt;210&gt; 21

&lt;211&gt; 28

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Forward primer for pHE718

## Immunize.ST25.txt

<400> 21  
gaagatctat gcatggacct aaggcaac

28

<210> 22  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Reverse primer for pHE718

<400> 22  
cgggatccct gctgggatgc acaccacg

28